Paper No. 31

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte KEN TERASAWA and YUICHIRO HATTORI

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Appeal No. 2003-0350
Application 08/771,399

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HEARD: JULY 16, 2003

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Before RUGGIERO, DIXON, and SAADAT, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 1-11, 27, 31, and 35-39. Claims 12-26, 28-30, and 32-34 stand withdrawn from consideration as being directed to a non-elected invention. An amendment filed February

20, 2002 after final rejection was approved for entry by the Examiner.

The claimed invention relates to image sensing control in which signals from first and second scan lines are output in parallel to first and second output amplifiers, respectively, with each of the amplifiers having different gain characteristics. A plurality of component signals for forming image signals from the signals of the plurality of scan lines are generated and output to a filter. The filter removes the noise frequency components contained in the component signals caused by the gain difference between the first and second amplifiers.

Claim 1 is illustrative of the invention and reads as follows:

1. An image sensing apparatus comprising:

readout unit having a first output amplifier for outputting a first signal of a first scan line and a second output amplifier for outputting a second signal of a second scan line in parallel, from an image pickup unit, wherein said first and second output amplifiers have different gain characteristics;

generation unit for generating a plurality of component signals for forming image signals from the signals of the plurality of scan lines; and

a filter which removes noise frequency components, caused by gain difference between said first and second amplifiers, contained in said component signals by removing at least one of predetermined frequency components in the

horizontal, vertical, and oblique directions from at least one of the plurality of component signals generated by said generation unit.

The Examiner relies on the following prior art:

Morishita et al. (Morishita)	4,339,771	Jul. 13, 1982
Reitmeier et al. (Reitmeier)	4,621,286	Nov. 04, 1986
Nishimura et al. (Nishimura)	4,714,955	Dec. 22, 1987
Ozaki et al. (Ozaki)	4,903,122	Feb. 20, 1990
Parulski et al. (Parulski)	5,189,511	Feb. 23, 1993
Juen	5,737,015	Apr. 07, 1998
	(filed Sep. 05, 1995)	

Claims 1-11, 27, 31, and 35-39, all of the appealed claims, stand finally rejected under 35 U.S.C. § 103(a). The Examiner rejects claims 1-8, 10, and 11 based on the combination of Parulski, Ozaki, Nishimura, and Juen, and adds Morishita to the basic combination with respect to claim 9. The Examiner's 35 U.S.C. § 103(a) rejection of claims 27, 31, and 35-37 is based on the combination of Nishimura and Juen, with Reitmeier separately added with respect to claim 38, and Ozaki separately added with respect to claim 39.

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Briefs[1] and Answer for the respective details.

[1] The Appeal Brief was filed May 21, 2002 (Paper No. 23). In response to the Examiner's Answer dated July 29, 2002 (Paper No. 24), a Reply Brief was filed September 30, 2002 (Paper No. 25), which was acknowledged and entered by the Examiner as indicated in the communication dated November 18, 2002 (Paper No. 27).

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the Examiner and the evidence of obviousness relied upon by the Examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellants' arguments set forth in the Briefs along with the Examiner's rationale in support of the rejections and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in appealed claims 1-11, 27, 31, and 35-39. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one

having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

We consider first the Examiner's obviousness rejection of claims 1-8, 10, and 11 based on the combination of Parulski, Ozaki, Nishimura, and Juen. With respect to claim 1, the sole independent claim in this group of rejected claims, Appellants' response (Brief, page 12; Reply Brief, pages 2 and 3) to the obviousness rejection asserts a failure by the Examiner to establish a prima facie case of obviousness since proper

motivation for the Examiner's proposed combination of references has not been set forth.

After reviewing the arguments of record from both Appellants and the Examiner, we are in general agreement with Appellants' position as stated in the Briefs. In particular, we agree with Appellants that none of the Parulski, Ozaki, and Nishimura references is concerned with the problems associated with noise created by differences in gain among output amplifiers. In this regard, our interpretation of the disclosure of Nishimura coincides with that of Appellants, i.e., while Nishimura discloses the setting of amplification factors of amplifiers 71-74 associated with color sensing elements to counteract aliasing, there is no disclosure of any concern with noise frequency problems caused by the differences in gains among the amplifiers.

Further, while the Juen reference does indeed address problems associated with the disparity of gains in amplifier output channels of an image processing system, Juen's solution is to generate offsetting voltages, not to filter out the noise frequencies caused by the amplifier gain mismatch. Given the disparity of problems addressed by the applied prior art references, and the differing solutions proposed by them, it is our view that any attempt to combine them in the manner proposed

by the Examiner could only come from Appellants' own disclosure and not from any teaching or suggestion in the references themselves.

We are further of the opinion that even assuming, arguendo, that the references could be combined in the manner suggested by the Examiner, the ensuing combination would not result in the specific combination set forth in appealed independent claim. In other words, the combination of Parulski, Ozaki, Nishimura, and Juen, would not result in an image sensing apparatus with a filter arrangement to remove noise caused by the gain difference between output amplifiers.

In view of the above discussion, since the Examiner has not established a prima facie case of obviousness, the 35 U.S.C. § 103(a) rejection of independent claim 1, as well as claims 2-8, 10, and 11 dependent thereon, is not sustained.

We also do not sustain the Examiner's obviousness rejection of dependent claim 9 in which the Morishita reference is added to the combination of Parulski, Ozaki, Nishimura, and Juen to address the claimed green color interpolation feature. We find nothing in the disclosure of Morishita which would overcome the innate deficiencies of Parulski, Ozaki, Nishimura, and Juen discussed supra.

Turning to a consideration of the Examiner's obviousness rejection of claims 27, 31, and 35-37 based on the combination of Nishimura and Juen, we do not sustain this rejection as well. For all of the reasons discussed previously, we find no indication from the Examiner as to how and in what manner Nishimura and Juen, given their differing problems and solutions, might be combined to arrive at the claimed invention. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992).

We also do not sustain the Examiner's 35 U.S.C. § 103(a) rejection of dependent claims 38 and 39 in which the Reitmeier and Ozaki references are separately added to the combination of Nishimura and Juen. While Reitmeier and Ozaki provide teachings, respectively, of oblique direction noise filtering (appealed claim 38) and simultaneous readout of image signals (appealed claim 39), there is nothing in either of these references that would overcome the previously discussed deficiencies of Nishimura and Juen.

In conclusion, we have not sustained any of the Examiner's 35 U.S.C. § 103(a) rejections of the claims on appeal. Accordingly, the decision of the Examiner rejecting claims 1-11, 27, 31, and 35-39 is reversed.

REVERSED

JOSEPH F. RUGGIERO Administrative Patent Judge	)	
JOSEPH L. DIXON Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
MAHSHID D. SAADAT Administrative Patent Judge	)	

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